

ABSTRACT OF DISCLOSURE

New and improved A scanning device and ~~corresponding method that include and involve~~ includes a movable stage on which a specimen is positioned, ~~irradiation means which irradiates an an irradiating device for~~ electron beam ~~onto an irradiation region of the~~ specimen, ~~secondary beam detection means used in a detection device for~~ generating a picture of the irradiation region by detecting a secondary beam ~~which consists of at least one of~~ including secondary electrons or reflected electrons from the irradiation region ~~of the electron beam region,~~ and an imaging electron optical system ~~which causes imaging of for imaging the~~ secondary beam on a detection ~~surface of the secondary beam detection means,~~ and which is ~~arranged between the specimen and the secondary beam detection means~~ surface. The A secondary beam ~~detection means is equipped with detector including~~ a fluorescent unit which is arranged on the detection surface, ~~and which converts surface to convert~~ the secondary beam into light, and one-dimensional line sensors ~~which have a structure arrayed in two dimensions for~~ forming electric charge by photoelectric conversion, an array imaging element ~~which continuously adds up for accumulating~~ the electric charge of the accumulated image in a predetermined line of the line sensors, ~~and the electric charge of the line of the image which moves accompanying the movement of the stage,~~ and a two-dimensional imaging element which emits electric charge by means of photoelectric conversion. A corresponding method is also disclosed. ~~The scanning device and corresponding method further include and involve~~ changover means for selectively irradiating the light converted by means of the fluorescent unit to an imaging element which is either one of the array imaging elements and the two-dimensional imaging element.